

In the Claims:

Please amend claims 1, 16, 17, 24, and 25 as presented below. No new matter is included in the amended claims.

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1. (Currently Amended) A magnetic head comprising:
an electrical contact pad;
a substrate on which the magnetic head is formed;
an insulating undercoat interposed between the pad and the substrate; and
a material selected to have a low dielectric constant interposed between the pad and the insulating undercoatsubstrate.
 2. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material is configured to decrease the parasitic capacitance of the magnetic head.
 3. (Previously Presented) The magnetic head of claim 1, further comprising a stud formed through the low dielectric material.
 4. (Previously Presented) The magnetic head of claim 3, wherein the stud comprises Cu.
 5. (Previously Presented) The magnetic head of claim 3, wherein the stud comprises a conductive material.
 6. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material comprises hard-bake photo resist.

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7. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material comprises SiO₂.

8. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material has a thickness in a range of between about 1 μm and about 100 μm.

9. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material has a thickness in a range of between about 10 μm and about 50 μm.

10. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material has a thickness of about 20 μm.

11. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material has a dielectric constant of less than about 9.

12. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material has a dielectric constant of about 3.

13. (Previously Presented) The magnetic head of claim 1, wherein the magnetic head carries a GMR sensor.

14. (Previously Presented) The magnetic head of claim 1, wherein the low dielectric material provides a platform for the electrical contact pad.

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15. (Previously Presented) The magnetic head of claim 1, wherein an electrical contact pad having a surface area of less than about 20 μm in order to reduce capacitance coupling with the substrate.

16. (Currently Amended) A reduced capacitance magnetic head comprising:
an electrical contact pad;
a substrate on which the magnetic head is formed;
an insulating a-conducting layer formed over the substrate;
a low dielectric material interposed between the pad and the substrate which is used as a platform for the electrical contact pad to increase the distance between the substrate and the electrical contact pad, the low dielectric material comprising hard bake photo resist and having a thickness of about 20 μm and a dielectric constant of about 3;
and
a conducting stud formed through the low dielectric material to make electrical connection between the electrical contact pad and the insulating conducting layer.

17. (Currently Amended) A disk drive system, comprising:
a reduced capacitance magnetic head comprising:
an electrical contact pad;
a substrate on which the magnetic head is formed;
an insulating undercoat interposed between the pad and the substrate;
a material selected to have a low dielectric constant interposed between the pad and the insulating undercoatsubstrate; and
a magnetic recording disk;
a spin-valve sensor for reading data recorded on the recording disk; and

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an actuator for moving the spin valve sensor across the magnetic recording disk in order for the spin-valve sensor to access different magnetically recorded data on the magnetic recording disk; and

a detector electrically coupled to the spin-valve sensor and configured to detect changes in resistance of the sensor caused by rotation of the magnetization of the sensing layer relative to the fixed magnetizations of the pinned layer in response to changing magnetic fields induced by the magnetically recorded data.

18. (Previously Presented) The disk drive system of claim 17, further comprising a stud formed through the low dielectric material.

19. (Previously Presented) The disk drive system of claim 17, wherein the low dielectric material is configured to decrease the parasitic capacitance of the magnetic head.

20. (Previously Presented) The disk drive system of claim 17, wherein the low dielectric material has a thickness in a range of between about 10 μm and about 50 μm .

21. (Previously Presented) The disk drive system of claim 17, wherein the magnetic head comprises a GMR sensor.

22. (Previously Presented) A reduced capacitance magnetic head comprising:
a substrate on which the magnetic head is formed; and
a contact pad disposed above the substrate and having a surface area less than about 20 μm in order to reduce capacitance coupling with the substrate.

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23. (Previously Presented) A magnetic head comprising:
- a substrate on which the magnetic head is formed;
 - an alumina undercoat layer comprising Al_2O_3 formed over the substrate;
 - an electrical contact pad; and
 - a layer of alumina interposed between the electrical contact pad and the alumina undercoat layer.
24. (Currently Amended) A magnetic head comprising:
- a substrate on which the magnetic head is formed;
 - an insulating alumina-undercoat layer comprising SiO_2 formed over the substrate;
 - an electrical contact pad; and
 - a layer of SiO_2 alumina-interposed between the electrical contact pad and the insulating alumina-undercoat layer.
25. (Currently Amended) A method of reducing capacitance in a magnetic head, comprising:
- providing a substrate;
 - providing an insulating layer directly over the substrate;
 - providing a read/write head; and
 - providing a material selected to have a low dielectric constant between the pad and the insulating layer for isolating the read/write head from the substrate in order to reduce the capacitance coupling between the read head and the substrate.
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